Clean Version of Amendments to the Specification:

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TELESCOPING EXTENSION POLE WITH BUILT-IN TUBE END PROTECTION

BACKGROUND OF THE INVENTION

1. Field of the Invention

(001) The present invention relates to telescoping extension poles for reaching difficult areas with a tool such as a paint roller.

2. Description of the Related Art

(002) Extension poles are well known in the art. In a typical device, a tube is joined to another tube by inserting the beginning of one tube into the end of the joined tube, the tubes locked into position by a push button device. Locking extension poles are useful, for example, to reach normally inaccessible desired locations with a desired tool, such as a paint roller. The method for a typical pole with locking characteristics to be joined with ~~join~~ an additional pole includes insertion of a tube with a reduced beginning into the normal sized engaging pole end, the connection ~~is~~ held by a push button or similar device. Examples of prior art extension poles are disclosed in U.S. Patent Nos. 3,380,097 to Pharris, 4,461,057 to Unger, and 4,524,484 to Graham.

(003) However, prior art extension devices are unsatisfactory in that they are comparatively inefficient, time consuming and damage prone in that they are limited in providing a protective end to curtail damage to surrounding obstacles in the given work environment. Thus, for example, furniture can be damaged by the blunt end of the conventional pole when the user moves the pole to perform required work. The user might place a buffer such as a rubber end into the end of the first pole, but as each additional pole is added, the rubber end must be removed from the first pole end and

placed into the end of the second pole. If a third pole is needed for additional length, the rubber end must be removed from the second pole end and placed into the end of the third pole. Further, the rubber end may be misplaced and if discovery of misplacement is not recognized, the chance of ~~to~~ damage to surrounding furnishings is enhanced. In addition, the time taken to remove and replace the protective end with each extension can be unproductive, wasting time and exerting undue energy.

BRIEF SUMMARY OF THE INVENTION

(004) The present invention is directed to a new and improved extension pole for a tool such as a paint roller or the like utilizing a locking push button to join additional like poles, each pole having a protective insert extending from one end and not requiring replacement with addition of another extension pole. The first pole extension includes means at one end for attachment to a tool such as a paint roller. The second and any successive extension pole is configured to be telescopically attached to the previous pole. Each pole is identical and has a larger diameter beginning end and a smaller diameter trailing end, wherein the smaller end of a leading or first tube can be inserted into the larger diameter beginning of an additional tube, the smaller diameter end of the first or leading tube thus being the inner tube of the connection with the larger diameter end of each additional tube being the outside tube of the connection. Each pole connection is locked into position by a push button, with each smaller diameter end of a pole having a rubber protective insert.

BRIEF DESCRIPTION OF THE DRAWINGS

(005) Fig. 1 is a perspective view illustrating the extension pole according to the present invention;

Fig. 2 is a cross section view of the extension pole of Fig. 1 taken along line 2-2 of Fig. 1;
Fig. 3 is a perspective view of an alternate embodiment of the extension pole in accordance with the invention wherein means is used for the connection of specialized tools or apparatus; and

Fig. 4 is a cross section view of the alternate embodiment of Fig. 3 taken along line 4-4 of Fig. 3.

DESCRIPTION OF THE INVENTION

(006) Referring to the drawings where like reference numerals refer to like elements in the several views, there is shown the extension pole, generally designated 10, according to the present invention. Fig. 1 illustrates the pole 10 including a first tubular portion 20 and a second longer elongated tubular portion 30, portion 30 having the same outside diameter throughout its length.. Tubular portion 20 has an open end 20a with an internal diameter larger than the outside diameter of the end of tubular portion 30, open end 20a configured for matingly accepting the end of another pole configured as end portion 30. Thus, multiple extension poles 10 may be sequentially connected one to the other. Aperture 21 is located in tubular portion 20 proximate open end 20a. It is configured for receiving push button means such as push button 32 of tubular portion 30 as more clearly shown in Fig. 2.

(008) Fig. 2 further illustrates tubular portion 30 including aperture 31 proximate the open end 30a thereof through which push button 32 is forced through aperture 31 by spring 33, push button 32 mounted to spring 33 and spring 33 mounted within tubular portion 30. Open end 30a is closed with a protective insert 34, of rubber or other suitable material, that protrudes beyond the open end 30a to provide a buffer to open end 30a. Insert 34 is pressure inserted or otherwise suitably mounted within the open end 30a, and so as not to impede further pole connection has a diameter not to exceed the exterior diameter of end portion 30. This enables sequential connection of multiple extension poles 10 without removal of the insert 34. In the preferred embodiment the insert 34 is of rubber or the like and is pressure, or compressively, inserted into the end of the portion 30. Thus, the insert 34 is likewise replaceable, that is, it can be compressed and removed.

(009) For the attachment of a first extension pole 10 to a tool having an end portion such as that of portion 30, the end portion 20 of extension pole 10 would be fitted over the end portion of the tool. That is, the male tube end of each tube 10 is inserted into the enlarged female end of each additional tube to form an inner and outer tube connection. Extension pole 10 would then be locked into place with the tool by depressing pushbutton 32 until it

could be forced through an aperture corresponding to aperture 31 by spring 33. Insert 34 would terminate the connection to provide end protection to portion 30 as well as limit damage to the operating vicinity.

(010) In configuration, pole 10 is formed of hollow cylindrical tubing, portion 30 having an outside diameter of approximately one and 3/8 inches Portion 20 has an inside diameter slightly greater than the outside diameter of portion 30, or about one and 7/8 inches so as to freely accept portion 30. Portion20 is attached to portion 30 by welding or other suitable means, or it may be initially formed as an integral unit with portion 30. The total length of pole 10 is in the range of 3 ½ feet. Portion 20 must be of sufficient length to provide satisfactory strength and stability when connected as disclosed above, a length of five and 7/8 inches having been found to be adequate. Push button 32 is located about two and ½ inches from the end of portion 30 and aperture 21 is located about two and ½ inches from the end of portion 20.

(011) Fig. 3 illustrates an alternate embodiment, generally designated 40, in accordance with the invention wherein, as indicated by the like reference numerals, tubular portion 30 is identical to the tubular portion 30 of Fig. 1. The difference is that the portion 20 of Fig. 1 has been replaced with a threaded connection 41 pressure inserted or otherwise suitably mounted into the tubular end 30a opposite the insert 34 for threaded connection to the handle of a paint roller or other desired tool. This embodiment can be used as discussed above in attachment of a a first extension pole 10 to a tool having an end portion such as that of portion 30, For instance the threaded connection 41 can be matingly connected to the handle of a paint roller. Fig. 4 is a cross section view of the embodiment of Fig. 3 taken along line 4-4 thereof, and further illustrating the manner in which spring 33, push button 32, insert 34 and threaded insert 41are mounted within pole portion 30.

(012) While there has been shown and described a preferred embodiment, it is to be understood that various other adaptations and modifications may be made within the spirit and scope of the invention.

What is claimed is: